

REMARKS

Claims 1-8 are pending. Claims 4-6 have been withdrawn from consideration. Claim 1 is currently amended. Applicant has amended independent claim 1 to clarify that the (meth)acrylic polymer is not copolymerized with an organophosphorous compound. The amendment to claim 1 has been made for purposes of clarification and without adding new matter. Support for the amendment to claim 1 may be found, for example, in Applicant's specification at page 6, lines 25-27 and page 7, line 21 through page 8, line 3. Applicant believes that the amendment to claim 1 places the application in condition for allowance, or alternatively, in better condition for appeal. Applicant respectfully requests entry of the Amendment. Upon entry of this Amendment, claims 1-8 remain pending. Applicant respectfully requests reconsideration of the application as currently amended, and prompt allowance of the non-withdrawn claims.

Rejections under 35 U.S.C. § 102 and § 103

Claims 1-3 and 7-8 stand rejected under 35 USC § 102(b) as allegedly being anticipated by or, in the alternative, under 35 USC § 103(a) as allegedly being obvious over Yamazaki et al. (JP 2000-313785). Applicant respectfully disagrees with the rejection of the claims over Yamazaki et al. under 35 U.S.C. § 102(b) and 103(a), at least because the Patent Office has failed to meet its burden of establishing that Yamazaki et al. discloses, teaches or suggests all elements of Applicant's presently claimed invention, as required to support a rejection for alleged anticipation under 35 U.S.C. § 102.¹

Applicant has amended independent claim 1 to clarify that the (meth)acrylic polymer is not copolymerized with an organophosphorous compound, and therefore that the claimed organophosphorous halogen-free flame retardant is a separate chemical compound from the claimed (meth)acrylic polymer. The Patent Office admits that Yamazaki discloses an organophosphorous compound which is a phosphoric ester methacrylate (paragraph 0023) which is copolymerized with styrene, methyl (meth)acrylate, ethyl (meth)acrylate (paragraph 0025).² Applicant therefore respectfully submits that Yamazaki cannot anticipate or make obvious Applicant's presently claimed invention, at least because the Patent Office has not shown that

¹ See *Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 231 USPQ 81 (Fed. Cir. 1986) ("for prior art to anticipate under 102 it has to meet every element of the claimed invention").

Yamazaki et al. discloses, teaches or suggests Applicant's presently claimed (meth)acrylic polymer that is not copolymerized with an organophosphorous compound.

In addition to the foregoing, Applicant submits that a dependent claim should be allowed when its parent claim is allowed.³ Claims 2-3 and 7-8 each depend from independent claim 1. Accordingly, when independent claim 1 is allowed, all claims depending therefrom should also be allowed. The rejection of claims 1-3 and 7-8 under 35 USC § 102(b) as allegedly being anticipated by or, in the alternative, under 35 USC § 103(a) as allegedly being unpatentable over Yamazaki et al. has been overcome, and should be withdrawn.

Response to Arguments

In addition to the foregoing, Applicant respectfully disagrees with the Patent Office's response to Applicant's arguments made in the Amendment filed November 27, 2007. The Patent Office alleges that, because the PTO cannot conduct experiments, it has shifted to the Applicant the burden of showing that Yamazaki et al.'s composition inherently includes the hydrated metal compound in an amount of 40-90 vol%.⁴ Applicant respectfully disagrees with the Patent Office, and respectfully resubmits that the Patent Office has not properly met its burden of establishing a *prima facie* case of inherency based on Yamazaki et al.

Anticipation can be found when a claim limitation is inherent or otherwise implicit in a single prior art disclosure.⁵ However, a *prima facie* case of inherency is established when the extrinsic evidence shows that (1) the prior art necessarily describes the subject matter claimed, or (2) reasonably would have suggested to a person having ordinary skill in the prior art that the prior art necessarily describes the subject matter claimed. Anticipation cannot be based on possibilities or probabilities.⁶ Furthermore, "[a] claim limitation is inherent in the prior art if it is *necessarily* present in the prior art, not merely probably or possibly present."⁷

² Office Action dated February 13, 2008, page 3, lines 5-10.

³ *In re McCarn*, 101 USPQ 411 (CCPA 1954).

⁴ Office Action dated February 13, 2008, page 5, lines 1-17.

⁵ *Standard Havens Products, Inc. v. Gencor Industries, Inc.*, 953 F.2d 1360, 1369 (Fed. Cir. 1991).

⁶ *See Continental Can Co. USA, Inc. v. Monsanto Co.*, 948 F.2d 1264, 1269 (Fed. Cir. 1991) ("The mere fact that a certain thing *may* result from a given set of circumstances is not sufficient.").

⁷ *Akamai Technologies, Inc. v. Cable & Wireless Internet Services, Inc.*, 344 F.3d 1186, 1192 (Fed. Cir. 2003). *See also In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999), *In re Rijckaert*, 9 F.3d 1531, 1534 (Fed. Cir. 1993), and *Ex parte Levy*, 17 USPQ2d 1461, 1464 (BPAI 1990).

Applicant respectfully contends that it is improper for the Patent Office to cite a density for aluminum hydroxide of 2.4 g/cm^3 , and, without providing on the record any evidence found within the disclosure of Yamazaki et al. or within the knowledge of a person of ordinary skill in the art related to the density of the radical polymerizable resin, engage in speculation as to the volume percent of aluminum hydroxide corresponding to a mixture of 100 to 300 parts by weight of aluminum hydroxide to 100 parts by weight of radical polymerizable resin. Absent evidence in the record regarding the density of the radical polymerizable resin disclosed by Yamazaki et al., Applicant respectfully submits that it is impossible to calculate a volume percentage of aluminum hydroxide as an amount based on the total volume of the composition (i.e. aluminum hydroxide plus radical polymerizable resin) using only the density value provided for aluminum hydroxide.

If the Patent Office disagrees, then the Examiner is respectfully invited to provide, on the record, a detailed calculation showing the mathematical basis for determining a volume percentage of a mixture of aluminum hydroxide and radical polymerizable resin in an amount specified by weight using only a density value for aluminum hydroxide, without specifying a density value for the radical polymerizable resin. Thus, Applicant respectfully submits that the Patent Office has not properly met its burden of establishing a *prima facie* case of inherency based on Yamazaki et al., and further, has not shown that Yamazaki et al. necessarily anticipates or makes obvious Applicant's presently claimed hydrated metal compound in an amount of 40-90 vol% of the total volume of the composition.

CONCLUSION

Entry of the Amendment to the pending claims is respectfully requested. For at least the foregoing reasons, the rejection of claims 1-3 and 7-8 for alleged anticipation under 35 U.S.C. § 102(b), and alleged obviousness under 35 U.S.C. § 103(a) has been overcome, and should be withdrawn. Reconsideration of all pending non-withdrawn claims as currently amended is also respectfully requested. In view of the above, it is submitted that the application is in condition for allowance. Allowance of the claims at an early date is solicited. In the event that any further questions may arise, Applicant respectfully requests a telephone interview to more fully understand the Examiner's position and advance this case to issuance.

Respectfully submitted,

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